ABSTRACT

A method and apparatus to perform a multi-field matching search. A search unit groups single fields of a multiple-field source into a search target having multiple-field keys (MFKs) whose single fields correspond to the single fields in multiple-field vectors (MFVs) of entries in a data structure. The search unit generates a set of queries based, at least in part, on the MFKs, where each query has a different MFK as a lead MFK. The search unit determines, based, at least in part, on a query, whether the non-wildcard values in the MFVs of an entry match the non-wildcard values in corresponding MFKs of the search target. If no entry has non-wildcard values in the MFVs that match the corresponding non-wildcard values in the MFKs, the search unit searches for, based, at least in part, on the set of queries, the entry having non-wildcard values in a MFV that match the non-wildcard values in a corresponding lead MFK, plus remaining MFVs that match corresponding remaining MFKs based on matching the non-wildcard values and wildcard values.